PC ELITE & PC IEEE

DESCRIPTION

The half size card extracts the ultimate IEEE 488 performance from your PC. Using 4 custom programmed logic chips we have taken PC-based IEEE cards to the limit. PC Elite has the complete Controller, Listener and Talker ability and is 100% IEEE 488.2 compatible. PC Elite is switch selectable as PCii or PCiia compatible. Based on the highly popular NEC 7210 GPIB controller chip, PC Elite is 100% register compatible with the IBM GPIB. and the "Classic" IEEE 488.1 version of NI PCii/iia cards. PC Elite is also fully compatible with a host of third party data capture and analysis software.

Using our GPIB.COM driver existing programs written for any NI card will work with the PC Elite card.

The PRO488 device driver, detailed opposite, is the ideal environment for developing new DOS and Windows applications.

The PC Elite combines the power and flexibility of the IEEE standard with the performance and availability of the all-pervading PC bus computer. Choose the PC Elite card when compatibility and performance are the issues.

GPIB.COM DRIVER

Our 100% NI compatible GPIB.COM driver allows you to maintain and run existing applications developed for use with any NI GPIB card. GPIB.COM is the binary device driver interface developed by National Instruments and shipped with every one of their IEEE cards. A large number of third party applications, as well as NI's own Lab Windows and Lab View products have been written to work with this driver. Our GPIB.COM driver and it's associated BBCONF program are 100% compatible with the NI driver allowing users to run all existing NI applications without any change.

The high performance Elite card with GPIB.COM allows migration to a more cost-effective platform.

HIGH SPEED DMA

The DMA hardware allows selection of one of three PC direct memory access channels for high speed data transfers, DRQ1-3. The PC Elite allows DMA interrupt-sharing with third party cards. DMA data transfer rate exceeds 400K bytes per second!

FEATURES

- NEC 7210 intelligent GPIB controller chip
- 4 custom programmed logic chips
- 3 DMA Channels
- 400k/s DMA transfer
- Interrupts 2-7, 10-12, 15
- Easy to program from Windows and ALL DOS languages via PRO488

COMPATIBILITY

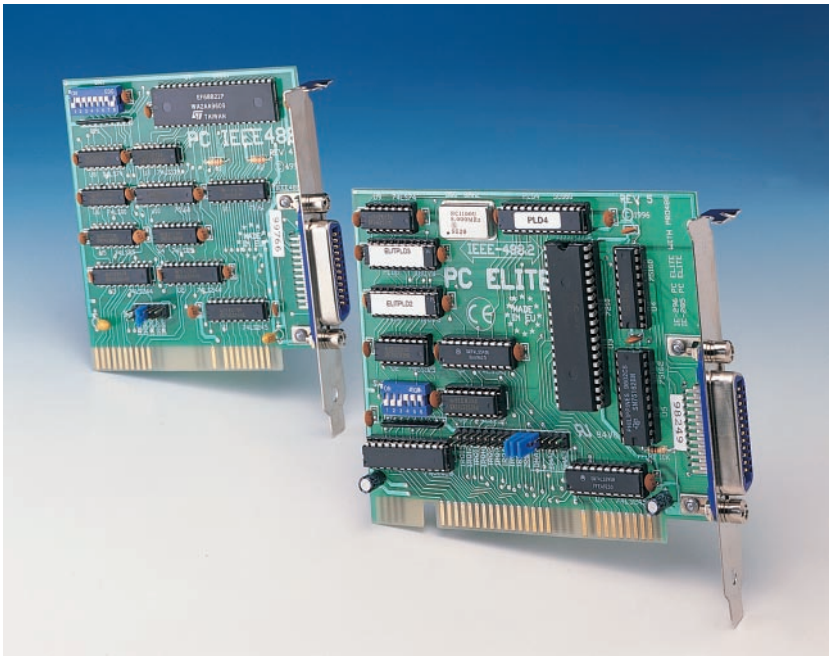
- 100% IEEE 488.2
- Labtech Notebook
- Asyst/Asystant GPIB
- All DOS software written for IBM, NI cards using GPIB.COM driver
- "Classic" NI PCii/iia
- Windows 3.1, Win95

ELITE SPECIFICATION

- I/O addresses:
- PC iia: 02E1H
  22E1H
  42E1H
  62E1H
- PC ii: 02B8H
  02C0H
  0300H
- Interrupt sharing in PCiia mode
- DMA Channels: 1,2 or 3
- DMA Transfer Rates: > 400k bytes per second.
- Power: 550mA @ 5V
- Weight: Under 0.15kg
- Size: 10 X 13.5cm

PC IEEE

As PC Elite but host processor controlled for maximum flexibility and lower cost.



ORDER

DESCRIPTION	CODE
PC ELITE ONLY	IE-285
PC ELITE with PRO488	IE-296
GPIB.COM DOS DRIVER	IE-736
PC IEEE with PRO488	IE-340
PC IEEE488 CABLE (Standard) 2m.	IE-780
PC IEEE CABLE (Low profile) 2m.	IE-769

"Ultimate IEEE 488 performance from your PC"

BRAIN BOXES
CALL TECHNICAL SALES TODAY! Tel: 0151 220 2500

PC ELITE & PC IEEE

PRO488

The perfect partner for the PC ELITE card is Professional 488, the best PC-based IEEE software in the world! PRO488 makes the PC ELITE card an integral part of your PC, allowing it to manage an IEEE bus controlling up to 14 instruments. An easy to use, enhanced industry standard control language addresses the IEEE devices and provides complete instrumentation control.

The heart of the PRO488 system is the device driver that loads automatically when your PC is switched on, giving access to an IEEE port in the same way as the other resident ports LPT1 & COM1. PRO488 makes full use of the advanced features of your PC and your IEEE bus instruments.

QUICK BASIC EXAMPLE

To command Tektronix scope to digitise waveform and return it to PC.

```
10 OPEN "IEEEDATA" AS #2          'OPEN
20 PRINT#2,"WAV?"                 'OUT-
                                    PUT
30 READINGS$=IOCTL$(2)            'INPUT
```

Data can be sent to the IEEE bus devices in several ways. The simplest is by writing to the "IEEEDATA" file. PRO488 automatically addresses the devices to listen and the PC outputs your data.

Reading the "IEEEDATA" file inputs data directly into your variable from the IEEE bus device using a complete handshake sequence.

TURBO PASCAL EXAMPLE

```
VAR
buffer : String [255];
ieeedata : Text;
BEGIN
Assign(ieeedata,'IEEEDATA');
Rewrite(ieeedata);
Writeln(ieeedata,'WAV?');
Reset(ieeedata);
Read(ieeedata,buffer);
```

FORTRAN EXAMPLE

```
CHARACTER BUFFER*255
OPEN(1,FILE='IEEEDATA',STATUS=OLD,
       ACCESS='SEQUENTIAL')
WRITE(1,*)"WAV?"
READ(1,*)BUFFER
```

PRO488 ENVIRONMENT

PRO488 is the ideal environment for IEEE based data acquisition. Mature and carefully thought out, it implements a superset of Hewlett Packard's HPIB language.

The commands, and your programs, read just like plain English, so program development and maintenance time is cut to an absolute minimum. PRO488 runs identically across the range of DOS & Windows languages. The syntax, parameters & returns of the PRO488 system remain the same, independent of the language you are running. No extra language driver or run time modules are needed to implement a new language. So you can use the ideal IEEE system with the language of your choice.

PRO488 COMMAND LIST

ABORT	REMOTE	LLO
CLEAR	SPOLL	MTA
CONFIGURE	STRING	PPC
DISABLE	TO	PPD
DMA	TRIGGER	PPE
END=	WAITSRQ	REN
ENTER	ATN	SDC
EOS	CMD	SEC
ERRORS ON/OFF	DATA	SPD
IRQ	DCL	SPE
LOCAL	EOI	SRQ
LOCKOUT	GET	TALK
NO TO	GTL	TCT
OUTPUT	IFC	UNL
PPOLL	LAG	UNT

Just some of the HP style commands recognised by PRO488's intelligent command handler.

PRO488 is feature rich, with a wide range of commands from the lowest level, of individual line control, right up through single word commands that perform or initiate whole sequences of bus actions.

Complete worked examples, source code, make files, icons, everything you need in each of Visual Basic, QuickC for Windows, Visual C++, Borland C++ and Turbo Pascal for Windows.

LEARNT IN MINUTES

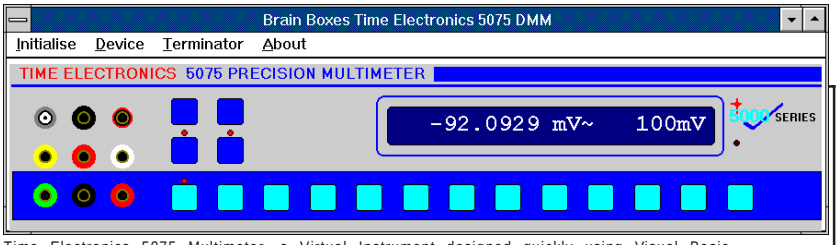
PRO488 talks the established IEEE control languages, so you probably already know how to use it! A good way to learn is interactively from the PC keyboard using the GPIBTALK program. GPIBTALK is supplied ready to run and with source code in each of 5 DOS languages. Menu driven, it allows you to send IEEE commands, transmit & receive data from your bus devices and check the GPIB bus status, all at the touch of a single key. You get a good feel of the power and ease of use of the PRO488 command language in a very short time. GPIBTALK is a fully working skeleton program on which to build your own custom applications. Most IEEE equipment includes worked examples that are virtually word for word PRO488 commands!

The instant and simple PRO488 concept make Visual Basic and PRO488 the intuitive system for writing Windows applications quickly and effectively.

PRO488 API

Pro488Present
Pro488WriteData
Pro488ReadData
Pro488WriteCtrl
Pro488ReadCtrl

Most Windows API's read like an encyclopaedia, but, true to form, PRO488 keeps it simple.


Brain Boxes Time Electronics 5075 DMM
Initialise Device Terminator About
TIME ELECTRONICS 5075 PRECISION MULTIMETER
-92.0929 mV~ 100mV
5000 SERIES

Time Electronics 5075 Multimeter, a Virtual Instrument designed quickly using Visual Basic.

"PC-based IEEE cards to the limit"